Challenge TB - Cambodia

Year 2
Quarterly Monitoring Report
April-June 2016

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Cover photo: TB awareness raising banner was placed in front of Lvea health center, Prey Chhor OD, Kampong Cham province (Credit: Ngo Menghak)

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1. Quarterly Overview

Country	Cambodia
Lead Partner	FHI 360
Other partners	WHO, KNCV
Workplan timeframe	October 2015 – September 2016
Reporting period	April - June 2016

Most significant achievements: *(Max 5 achievements)*

1. ACTIVE CASE FINDING (ACF)

1.1 During this reporting period, Cambodia Anti-Tuberculosis Association (CATA), with the financial and technical support from the Challenge TB (CTB) project implemented house to house TB screening, diagnosis and treatment in 56 health centers (HCs) in 3 Operational Districts (ODs) (Kampong Speu, Sampeou Meas and Bakhan).

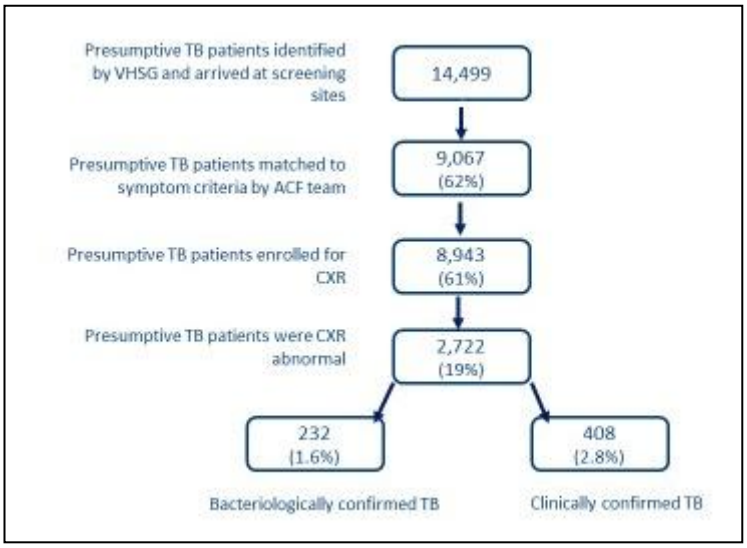

Figure 1: Active case finding in 56 HCs

1.2 Prior to the start of the activity, a one-day preparation meeting was conducted to inform HC staff and Village Health Support Groups (VHSG) about the details of the procedure of activities. VHSG and HC staff informed villagers, especially elders, ages 55 years and above, about the activities and a site where patients were screened for tuberculosis (TB). On selected days, presumptive TB patients presented for screening at designated sites. Patients meeting criteria were referred for a Chest X Ray (CXR). Sputum samples were submitted for GeneXpert (Xpert) testing for all abnormal CXR (both CXR and Xpert machines are available on site). From April to June 2016, among 14,499 presumptive TB patients identified and referred to screening sites by VHSGs, 9,067 (62%) presumptive TB patients matched TB symptom criteria screened by ACF team. Among these presumptive patients with symptoms, 8,943 (61%) were enrolled for CXR; 2,722 (19%) patients had abnormal results and submitted sputum samples for Xpert testing. As a result, 230 (1.6%), 2 (0.01%) and 408 (2.8%) patients were bacteriologically, Rifampicin resistance and clinically confirmed, respectively (Figure 1).

2. EDUCATIONAL TOOL DEVELOPMENT

2.1 During this quarter, two patient-education banners were finalized and approved by the National TB Program (NTP) and printed. The banners aimed to (1) instruct presumptive TB patients on how to produce good quality sputum and (2) to increase knowledge and awareness of having suggestive TB.

2.2 More than 500 banners have been displayed in the community, at the 100 HCs, Referral Hospitals (RH) and public places, such as pagoda, in CTB's and Empowerment Community for Health (ECH)'s targeted areas to increase the TB awareness of communities, which it is hoped will also promote the health seeking behavior of communities for early TB diagnosis and treatment. The remaining 700 banners will be further distributed in the next quarter.

3 ASSESSMENT OF SEMI-ACTIVE CASE FINDING IN PAGODA

3.1 From 29 May to 8 June, Dr. Alice Zwerling, senior epidemiologist from KNCV, assessed the semi-ACF (SACF) program in pagodas. The objective of the mission was to (1) assess change in case notifications over time & positivity rate among the elderly, (2) assess the semi-ACF (SACF) methods used, (3) provide observations from the field, and (4) provide recommendations for diagnostic algorithms and expansion of SACF program among the elderly.

3.2 She reviewed existing SACF program, conducted field visits and interviewed TB supervisors of two ODs (Korng Pisey and Prey Chhor). Based on preliminary results, the SACF program provides a higher yield of TB case notification among elderlies compared to the national TB incidence in 2015 (390 per 100,000 population vs more than 2,000 per 100,000 population). Number Needed to Screen using Risk Prioritization method is less than 100 across two ODs. The observations included:

- Many elderlies had previous TB treatment history. It is a good opportunity to collect sputum for the Xpert test, in addition to routine culture and sensitivity, in order to more rapidly diagnose Rifampicin Resistance (MDR TB) in relapsed cases.
- Many elderlies had difficulty producing sputum on the spot.
- Patients with negative Xpert results were referred for CXR yet they still did not have access to CXR service at RHs.

3.3 The consultant has provided recommendations as follows:

- Analyze and compare case notifications and trends across all ODs.
- Perform risk prioritization tool to assess potential case-finding and diagnostic algorithms for other high-risk groups.
- Assess cost-effectiveness of SACF program at Pagodas.
- Ensure that all previously treated cases collect sputum for culture and sensitivity (Xpert test) and CXR.
- Consider morning sputum collection on the next day versus sputum collection on spot as a topic for Operational Research (OR) to see if the yield is different and
- Refer those who are strongly suspected of having TB for CXR screening.

Technical/administrative challenges and actions to overcome them:

- **Low MDR case notification: the reimbursement system (CENAT) for sputum transport for suspected MDR TB cases** for Xpert and culture is suboptimal. Additional limitations of the system include: misclassification of TB cases (e.g. retreatment cases may be classified as new cases), insufficient supportive supervision and lack of follow-up after referral of presumptive MDR TB patients. These challenges may help explain the decline in MDR case notifications.

- **Action taken**: As a short-term solution, CTB will work with sites where hospital engagement is implemented to pilot a financial support system. This includes quicker and faster reimbursements and clear instruction on the need for supporting documents for the financial re-imbursement. For the long-term solution, CTB will work with CENAT to evaluate the system and propose a solution. CTB staff will jointly conduct supervision activities with the TB supervisor at central or provincial levels to correct diagnostic misclassification, and to improve enrollment of MDR TB patient referrals by developing a feedback mechanism.

2. Year 2 activity progress

Sub-objective 1. Enabling environment								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Public Private Mix (PPM) TB DOTS	1.1.1	- Negotiate and establish MOU with PPs in target ODs - Sign MOU with PPs (private providers) - Map the private providers - Orientation of the project with PPs for the startup of implementation	- Implement PP to all selected 3 ODs from Q2 onward— - track number of referral and TB diagnosed referred by PPs from Q2 onward	- Internal review of the PPM activities - Sharing experience to CENAT and other stakeholders	PPM approach implemented, refined and plan to expand to other ODs	**Not accomplished** The PPM activity is being re-considered by the Mission and thus was approved in late Mar.	**Not met**	NTP director agrees to allow D'Arcy Richardson to come and review the model of PPM. Consultant will come in 2nd week of August.

Sub-objective 2. Comprehensive, high quality diagnostics								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
National TB lab operational plan	2.1.1	-Discuss with CENAT lab director to form team to develop a lab operational plan -Review	- Draft the national lab operational plan with consultation with TB lab director - Consultative	- Revise the lab operational plan according to the comments / inputs	Operational plan and lab guidelines developed and used	**Accomplished** - CTB discussed initial plans with lab director of CENAT in order to develop lab operational plan.	**Not met**	This task has not been implemented due to the competing priority of CENAT staff with the Xpert machine expansion and trainings. This operational plan integrated into national annual operational

		existing TB lab guidelines and other relevant documents - Consultative meeting with key lab technicians/ supervisor and partners	meeting to get comments / inputs on the draft	- Present the final draft operational plan to TB lab director and team on the revised				plan, in which all provincial and OD TB supervisors are involved.
Provide TA to the lab at national, hospital and health center levels to ensure the quality of smear microscopy preparation and reading	2.2.1	- Act as a secretariat of Technical Working Group on laboratory throughout the year. - Conduct EQA to all 18% (40/215) microscopic centers. - Perform on site coaching at microscopic centers to ensure the good ability of smear preparation and reading in 10 of 40 microscopy centers which has scored lower than acceptable level on the EQA report	- Onsite coaching to at least additional 10 microscopic centers whose EQA score is lower than acceptable level on EQA report. - Provide on-site coaching and support to Xpert sites which have trouble shooting	- Conduct EQA to other additional 10 microscopic centers sites whose score is lower than acceptable level on the EQA reports	- On site coaching to 40 microscopy centers under CTB geographic areas conducted. - Quality of smear preparation and result of reading is at an acceptable level (as defined by EQA SOP)	**Accomplished** - CTB was established as secretariat of TB Lab technical working group - 2 TB Lab TWG meetings conducted **Not accomplished** EQA has been done but the report was not released yet in this reporting period.	**Not met**	EQA performance is under GF (Global Fund) who did not conduct EQA during previous and current periods. CTB will use previous reports as reference to provide coaching support and improve capacity of the lab technicians whose lab was found to demonstrate poor EQA performance, an alternative is that CTB will support for conducting EQA in nine ODs under CTB supported sites.
Development of National TB Lab Guidelines	2.2.2	-Discuss with the CENAT lab director to	- Draft the guidelines to include smear	- Revise the guidelines according to	Final draft of guidelines	**Accomplished** - Discussion on the outline	**Not met**	Linda Oskam came from 4 to 8 Jul for a consultative meeting with key TB lab technician to discuss

		form a team to develop a lab guideline -Review existing TB lab guidelines and other relevant documents - Consultative meeting with key lab technicians/ supervisor and partners	microscopy, Xpert (consider specifics to address which samples acceptable, ex. CSF, LN vs. sputum only; interpretation of indeterminate results, ex. To repeat or not; and during treatment (should not be done) or how soon after treatment in suspect reinfection vs. relapse to use Xpert) and culture with consultation with the TB lab director - Consultative meeting to get comments / inputs on the draft	the comments / inputs - Present with the draft guideline to the TB lab director and team on the revised		of laboratory guidelines was made. - ToR and schedule for a lab consultant were made. **Not accomplished** - Consultation meeting with key lab technicians was not conducted in quarter 3 but 4.		and write outline of TB lab guidelines.
Revise national TB lab EQA SOP	2.2.3	- Work with national TB lab team to review the existing EQA SOP - Consultative meetings with EQA national assessors to get comments	- Revise EQA SOP according to the comments/ inputs - Discuss with TB lab director on the revised EQA SOP	Finalize TB lab EQA SOP	Endorsement from NTP director on final version of EQA SOP	**Not accomplished** The rationales of using the current SOP is due to the uncertainty whether budget is sufficient with the change of SOP.	**Not met**	CTB will keep discussing with US-CDC and WHO to identify the strategy to advocate him for the revision. This will require time.

		and inputs on EQA SOP						
Improve the operation and performance quality of Xpert machines.	2.4.1	- Develop a simple operation instruction to operate and maintain the Xpert machines, using the manufacturer's guideline (e.g., Xpert machines on mobile vans, etc.) - Enforce system to avoid stock out of cartridge, throughout the year	- Coaching support on operation to Xpert machines at 33 sites from Q2 onward - Provide on-site training to lab technicians on the operation, maintaining and basic fixing from Q2 onward. - Operation instruction printed and distributed to Xpert machine sites		- Operation instruction printed and distributed to 33 Xpert machine sites	**Accomplished** - Coaching support had been provided to the lab technicians at Xpert sites. - An operational instruction had been developed and printed to instruct the lab technicians for their daily operation and to fix when having minor trouble shooting. The operational instruction on how to maintain will be designed and printed out.	**Met**	

Sub-objective 3. Patient-centered care and treatment								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Elderly: Semi Active Case Finding (ACF)	3.1.1	- 15 PHD sub-contracts finalized and signed - Mapping pagodas, slum and high risk remote areas to conduct	Additional 25 selected sites of 2 ODs implemented Semi ACF - Provide technical supports as needed to ECH	- Additional 25 selected sites of same 2 ODs implemented semi ACF	- all sub-contracts developed and signed with 15 sub-contractors - Semi ACF implemented in a total of	**Accomplished** Sub contracts finalized and signed with PHD counterparts. Mapping pagodas for Semi ACF and census of elderly	**Met**	

		Semi Active Case Finding - Implement Semi ACF in 25 selected sites in 2 ODs.	- Semi ACF approaches modified to catch the hard to reach population		100 selected areas under 29 HCs of 2 ODs.	people in 29 HCs of Prey Chhor and Tbong Khmum ODs was completed. 91 Semi ACF were conducted in pagodas and mosques in period of Oct 2015 to Jun 2016.		
Increased MDR TB case finding among presumptive MDR TB high risk population	3.1.2	- Subcontract with Cambodia Health Committee (CHC) developed and signed - Develop a tool to capture the eligible cases (presumptive MDR-TB patients) that have been identified and failed to be reported /referred to diagnosis sites	- Referral of at least 260 presumptive MDR TB (per quarter, from Q2 onward) to diagnosis sites - Monitoring the referral of presumptive MDR TB patients under CTB coverage areas and ensure that reach diagnosis sites, from Q2 onward	- Review the current operation mechanism of MDR-TB implementation to minimize the cost. - Review the performance particularly on the referral of MDR suspects and active case finding for MDR TB	- 800 presumptive MDR TB under CTB coverage areas referred for testing - Tools to track referral developed	**Accomplished** Subcontract with CHC was completed 01 Jan 2016. An integrated checklist was developed to capture eligible presumptive MDR TB patients (integrated into supervision checklist). **Not Accomplished** 134 (71+63 (Q2+Q3) presumptive MDR TB patients referred for MDR testing.	**Partially met**	CTB will work with the MDR TB focal person to identify the root causes and develop a step wise approach to address it. It has been known for some time that the mechanism of reimbursement of sputum transport of MDR suspects was complicated and field people lost motivation. CTB will discuss with local Local Funding Agent to see how best this can be solved. This indicator is not controlled solely by CTB.
Childhood TB Strategy	3.1.3	- On site coaching to 21 RHs and to at least 100 HCs of the 21 ODs every quarter - work with Quality Health Services, a USAID funded project to develop joint supervision	On site coaching to additional 100 HCs of the 21 ODs	On site coaching to additional 100 HCs of the 21 ODs	Total 21 ODs which cover 316 HCs will implement CTB Childhood TB activities. - 21 RHs and at least 300 HCs received on site coaching	**Accomplished** A discussion took place with Empowerment Community for Health (ECH) on how the two partners can work together and how TA will be provided to ECH throughout the year. Joint supervisions were made between CTB and	**Met**	

		plans throughout the year - Provide technical support to ECH throughout the years				ECH in order for ECH to learn from CTB activities. 94% HCs (282/300) received coaching through supportive supervision (Q1+Q2+Q3=37+150+95 HCs).		
CTB Hospital engagement strategy	3.1.4	Implementation of hospital engagement in existing 5 hospitals - Providing on-the job coaching to supported hospitals, throughout the year		Internal review of hospital engagement activities and Document on "what works, what doesn't work and why"	5 hospitals implemented hospital engagement	**Accomplished** - The five existing hospitals have implemented hospital engagement for TB control. - CTB provided TA to relevant hospital staff via supportive supervision. **Not Accomplished** The internal review was brought for discuss with the CTB team, however the process of conducting the review was not made.	**Partially met**	The internal review will be conducted next quarter.
TB Control in prison	3.2.1	- 10 prisons implemented TB screening at entry, throughout the year - Developed transition plan and discuss with CENAT and General Department of Prison (GDP), and other partners on	- Tracked the progress of transition plan - Conducted additional 10 Quarterly meetings with all 10 prisons	Conduct annual ACF in 10 prisons	- ACF conducted in 10 prisons - Successfully hand over the TB activities in prisons to CENAT and partners	**Accomplished** - CTB informed/discussed transition plan with focal persons of NTP and raised in quarterly coordination meeting Q1. - Quarterly coordination meetings were conducted in the nine prisons in period of Jan-Mar 2016. CTB has informed CENAT director on the transition of TB control activities in prison. It was observed	**Met**	

		transition. - Conducted 10 Quarterly meetings with all 10 prisons				that the director of CENAT was disappointed as there is no other funding to continue the support. CTB has discussed with other partners, including Caritas, if they can possibly carry on the TB activities. None of the partners have committed to this.		
TB Control in prison	3.2.2	Monitor the performance of new inmate screening via supervision and data review, throughout the year		Review of new inmate screening system	- New inmate screening system in place - Review of the tracking system and systematic screening	**Accomplished** Monitoring on performance of new inmate screening was conducted and associated data were reviewed. All new inmates - 1,966 (Q1: 964 + Q2: 375+Q3: 627) were screened; 4 were found to have active TB, 1 of 4 diagnosed with active MDR TB.	**Met**	
PMDT: TA to Local partner, CHC	3.2.3	- All CHC technical staff available to support all MDR sites. -Joint supervision between CTB and CHC to at least another additional 5 MDR TB sites in each quarter, - Conduct home visit to all patients at	- Monitor performance activities implemented by CHC to ensure that all MDR TB cases have enabled support, from Q2 onward		- All MDR TB patients received DOTs supported and visited by DOTS watchers on a regular basis, by HC at every month and regularly visited by CHC al least every quarter. - All 10 MDR-TB sites have monitored by	**Accomplished** Joint supervision has been done by CTB and CHC staff. CTB staff attended 3 day workshop the shorter regimen and new drug conducted by KNCV in The Hague, the Netherlands. Monitoring the performance of CHC was done by CTB.	**Met**	

		least once a month			Joint team.			
PMDT: Enablers	3.2.4	- Provide living support and transportation support to 175 MDR TB patients to visit hospitals per scheduled appointment, throughout the year -Work with project Social Health Protection, a USAID funded to pilot financial support to the poor throughout the year			- Necessary lab tests support for MDR TB patients. - 175 patients got support and quarterly consultation at hospital.	**Accomplished** The subcontract with CHC is effective from Jan-Sep 2016. Before this period, CHC was the sub-recipient of GFATM, therefore support was being provided via GFATM. CTB has discussed several times with SHP project on the mobilization of resource. 176 MDR TB patients got monthly living support during this quarter.	**Met**	
PMDT: Community TB Care	3.2.5	- Conduct health check-ups and clinical monitoring to 175 MDR TB patients, from Q1 onward-Provide injection/drugs to 175 MDR TB patients on daily basis, throughout the year	- Joint home visit between CTB and HC/OD to DOTS watcher and patient, at least one per quarter, from Q2 onward		175 MDR TB patients get regular clinical monitoring and DOTS treatment	**Accomplished** 176 patients got clinical monitoring and DOTS during the reporting period.	**Met**	

Sub-objective 4. Targeted screening for active TB								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Implementation of contact investigation (CI) (household and neighbor contact) (including children)	4.1.1	- CI implemented in 316 HC of 21 ODs, from Q1 onward. - Share tools and materials to ECH for the implementation of CI. - Provided technical support to ECH as needed throughout the year	Monitoring support and coaching on CI to all HCs of 21 ODs in every quarter	Review CI tools	- CI implement in 262 HCs (21 ODs) - CI tool review	**Accomplished** 648 (Q1: 469 + Q2: 139 + Q3: 146) CI were conducted in reporting period of Oct 2015 to Mar 2016. CI tools were shared and used by ECH who implement CI in their respective coverage areas with TA from CTB. Monitoring support and coaching were conducted to CTB HC supported sites.	**Met**	
TB Control in Prison	4.1.2	CI made in cell where TB positive case found in all 10 prisons, throughout the year	Monitored the progress of activities, tracked number of smear positive patients and CI conducted, from Q2 onward		- 10 prisons under CTB conducted CI - Contact investigation conducted of all smear positive TB index	**Accomplished** 15 (Q1:5 + Q2:7 + Q3:3) CI conducted in cells (15 index found to have bacteriologically confirmed through routine screening). Among these 15 CI, no additional TB cases were identified.	**Met**	

Sub-objective 5. Infection control								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
TB-IC implementation in hospitals, prisons and community	5.1.1	- Developed an instruction for TB IC (basic administrative and environmental measure) for health facility level align with the national TB IC SOP. - Had discussions with the director of hospital/prisons and staff on the administrative procedure for TB-IC at 10 prisons and 5 hospitals.	- Baseline assessment on administrative and environmental TB-IC measure and practice conducted in selected 29 health facilities. - Modified TB IC checklist for community level and used. - Implementation of TB IC in 15 facilities (RH and Prisons), from Q2 onward.	- Implementation of TB IC at community level under 29 HCs, from Q3 onward	- 15 facilities (RH and Prisons) implement TB IC, and TB IC at community level implemented under 29 HCs under CTB coverage - Report on the baseline assessment	**Accomplished** Proper patient flow for cough triage among OPD patients has been implemented in five referral hospitals. The airflow at the general triage areas of those five hospitals is adequate. Basic TBIC was discussed with key persons in hospitals and 10 prisons including hospital directors of five hospitals. TBIC Baseline assessment tools & TB IC checklist for community (HC) was modified. TB IC interventions have been starting in 13 HCs, 7 RH and 10 prisons.	**Met**	
TB screening among HCW screening in hospital	5.2.1	Discussion with NTP and hospital directors on TB screening among HCW.	- Identified and selected 2 hospitals for TB screening. - Enrolled HCWs for TB screening.	TB screening among 250 HCW in selected hospitals	Report on TB screening among HCW	**Accomplished** Had discussions with relevant partners with regard to TB screening among HCW. CTB planned to screen HCW in Korng Pisey and Kampong Speu hospitals in June. It was agreed that a similar screening algorithm will be used at those hospitals.	**Partially met**	Upon further discussion with relevant NTP staff, the selected hospitals could be moved to Battambang provincial hospital where the number of health staff is about 250. The screening among HCW will be conducted in next quarter, Q4, due to the availability of CENAT key staff.

						Not Accomplished TB screening among HCW workers was postponed to next quarter, the key focal person of CENAT has moved to other health department.		

Sub-objective 6. Management of latent TB infection								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Isoniazid Preventive Therapy (IPT) for children under 5	6.1.1	- IPT activity implemented in 316 HCs of 21 ODs, throughout the year. - Monitoring support to IPT implemented sites, throughout the year. - Provided technical support to ECH as needed. - 570 eligible children enrolled for IPT.	- Provided technical support to ECH as needed. - 570 eligible children enrolled for IPT.	- 570 eligible children enrolled for IPT. - Training module on Childhood TB that was developed by KNCV was translated and used for coaching.	Total of 316 HCs implemented IPT activities. - 2,300 eligible children enrolled for IPT	**Accomplished** The IPT activities were implemented in HCs under CTB geographic responsibility. Forms/tools were instructed and shared with ECH. **Not accomplished** There were 1,022 (Q1: 283 + Q2: 353 +Q3: 386) children (target at 1,710) with close contact with bacteriologically confirmed TB who were enrolled for IPT.	**Partially met**	Not all parents have consented for their children to be enrolled for IPT. CTB with OD/HC support will promote IPT awareness for the communities/parents of eligible parents.

Sub-objective 7. Political commitment and leadership								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
National strategic plan on TB control finalized	7.1.1	Finalization of NSP on TB control.	Reviewed and monitored the response of key strategies.	Identified gaps for GFATM application.	NSP on TB control fully implemented nationwide Identify gaps for resource mobilization.	**Accomplished** The national TB program has reviewed its key strategies particularly areas that have been funded by both GFATM under new funding model, USAID's grants and others. It was observed that the case notifications were low in drug susceptible and MDR-TB in year 2015. CENAT has called for Inter-agency Coordinating Committee meeting with partners to present the activities and discuss on results.	**Met**	

Sub-objective 8. Comprehensive partnerships and informed community involvement								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Key staff of CTB be a member of Cambodia Coordinating Committee (CCC) and Principal Recipient of Technical Review Panel (PRTRP) of GF	8.2.1	CTB staff attended CCC and quarterly PRTRP meetings and provided inputs on both technical and financial areas.	Evaluated GFATM implementation and provided input to improve quality and progress toward targets with the goal	Continue to provide inputs on implementation, progress toward targets.	GFATM performance rating maintained at "A" level.	**Accomplished** Technical input was given to CCC and PRTRP meeting. Questions were raised on the decline of total TB case notifications on both drug susceptible and MDR-TB. It was observed that a majority of the sub-	**Met**	

			to improve GFATM ratings.			recipients do not understand the concept of the approaches that need to be implemented. It was difficult to implement the approach in terms of intensification of case findings and sputum transport.		

Sub-objective 10. Quality data, surveillance and M&E								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Drug Resistance Surveillance	10.2.1	Development of technical working group to assist in preparation of protocol.	Drafted the protocol.	Near-final draft of DRS distributed to TWG and circulated for comments.	Drug Resistance Surveillance conducted.	**Accomplished** - Draft of the drug resistant survey has been developed. - CTB provided the TA support on the laboratory assessment and the preparation for survey via JATA.	**Met**	
Operational Research	10.2.2	Two OR protocols and tools were developed.	Data collection of both ORs.	-Data analysis of OR number 1. -Discussed the findings. -Prepared reports of OR number 1.	- OR report in draft (OR 1). - Preliminary findings for OR 2.	**Accomplished** One OR protocol has been developed and submitted for ethics approval. The objective of the research has been changed from the original idea. It is now focused on developing a TB screening algorithm for elderlies. CATA is a local partner who is involved in field	**Partially met**	Protocol is in the process of revision and ready to submit to ethics committee next quarter.

						implementation and data collection. **Not accomplished** - Data collection was not done and still awaiting final revision on protocol and approval from ethics' committee. - Another protocol is in the process of development. This is a sub-study of the main one.		
Internal Data Quality Improvement (IDQI) at OD and HC levels	10.2.3	Implementation of IDQI in 65 HCs in 9 ODs.	Implementation of IDQI in additional 65 HCs in 9 ODs.	-Monitored/ conducted spot checks to IDQI at HC level conducted by OD TB supervisors. - Conducted internal review on recording and reporting at OD and HC level.	- Implementation of IDQI in 15 ODs. - Drafted report of the review.	**Not accomplished** - IDQI has been conducting in 118 HCs, 75% of visits planned HC (Q1+Q2+Q3). - The internal review was discussed with the CTB team, but the implementation has not been conducted yet.	Partially met	- Delay implementation in quarter 1. - Field visit needs to involve CENAT staff.

Sub-objective 11. Human resource development								
Planned Key Activities for the Current Year	Activity #	Planned Milestones				Milestone status	Milestone met? (Met, partially, not met)	Remarks *(reason for not meeting milestone, actions to address challenges, etc.)*
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Year end	Oct 2015-Jun 2016		
Provide capacity building to C-DOT volunteers, health center and OD staff especially to	11.1.1	- Monitored and followed up after the	At least 80 supportive supervisions	At least 80 supportive supervisions	-Monitoring and coaching conducted	261 (86+86+89) supportive supervisions to the field after training were	**Met**	

those who are new or replaced turnover staff via supportive supervision		training to ensure the quality of performance after training. - At least 80 supportive supervisions conducted.	conducted.	conducted.	according to monitoring plan. - 3,930 persons received training/coaching. -322 supportive supervisions conducted.	conducted on a regular basis.		

3. Challenge TB's support to Global Fund implementation in Year 2

Current Global Fund TB Grants

Name of grant & principal recipient *(i.e., TB NFM - MoH)*	**Average Rating***	**Current Rating**	**Total Approved/Signed Amount****	**Total Committed Amount**	**Total Disbursed to Date**
New fund model (NFM) Cambodia TB (Year of signing: 2015 and PR: CENAT)**	A2	B1	$15,664,272	$8,073,508	$6,589,427

** Since January 2010*

*** Current NFM grant not cumulative amount; this information can be found on GF website or ask in country if possible*

In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

- There were around US$2 million savings of New Funding Model of GFATM as of March 2016. The savings are largely due to the delay in approval of the field monitoring visits at sub-national level to support field implementation, travel for training or meeting activities. NTP has submitted the reprogramming request to use the savings to GFATM for their approval.
    - **Action taken:** CTB staff, via WHO medical officer, provided TA support on the process of reprogramming and reprograming requested has been submitted to CCC in June 2016.
- The procurement of lab reagents, equipment and supplies to be used for current on-going laboratory activities and also for drug resistance survey was delayed. The delay was due to multiple factors: 1) poor communication between UNICEF and the PR, 2) the time required to finalize the Cost Estimate prepared by UNICEF, and subsequent approval by GF, 3) during which time the Cost Estimate was expired (valid only for one month), 4) necessity to repeat the whole process starting from getting a new Cost Estimate and approval, and 5) suppliers insisting on providing some essential items with short shelf life. The stock out on reagent for Mycobacteria Growth Indicator Tube has been stocked out and Lowenstein Jensen media has been used only.
    - **Action taken:** CTB via WHO medical officer initiated a meeting with UNICEF senior management and PR, and obtained support for the appropriate procurement of TB program supplies. UNICEF Cambodia is new to procuring TB laboratory supplies in relatively small quantity. If the similar bottleneck, especially with the short expiry of the Cost Estimate, continues, other options may need to be considered. TA support on the progress following the intervention is ongoing. The delay of this procurement has been discussed with Global Fund's fund portfolio manager.

Challenge TB & Global Fund collaboration this quarter – Describe Challenge TB involvement in GF support/implementation

TB drug management supported by GF

The current situation of TB medicine supply is rather complex with several orders with different sources occurring in parallel, including: Global Drug Facility (GDF) grant, USAID bridge funding, and Global Fund Fight Against HIV/AIDS, TB and Malaria (GFATM) grant for pediatric TB medicines in the pipeline. These supporting mechanisms are interconnected with the Government funding for the adult TB medicines starting with 30% in 2017.

- **Action taken:** The WHO Medical Officer, together with GDF consultant, GFATM missions, and WHO staff on Essential Medicines, participated in a series of discussions and field assessments on the management of TB medicines. The transitional plan development for procurement and management of TB medicines especially pediatric TB medicines was assisted. Forecasting required TB medicines, e.g. Fixed Drug Combination for adults and children, MDR-TB drugs, Isoniazid Preventive Therapy (IPT) for People Living with HIV (PLHIV) and child contacts, is closely related to the progress of each sub-component of the TB program (e.g. reduction in case detection including MDR-TB, slow progress in IPT both for PLHIV and child contacts). Follow-up work is being carried out to prepare for the timely procurement and distribution of TB medicines and finalization of the transitional plan for the pediatric TB medicines.

4. Success Stories – Planning and Development

Planned success story title:	Success story had been written last quarter. We will have another one written in last quarter of the year.
Sub-objective of story:	3. Patient-centered care and treatment
Intervention area of story:	3.2. Access to quality treatment and care ensured for TB, DR TB and TB/HIV for all risk groups from all care providers
Brief description of story idea:	A patient accessed private services and spent a significant amount of money on services and treatment – including, selling his motorbike and land - while continuing to be sick. At last, he met with VHSG and his sputum was collected for Xpert. The result confirmed that he was infected with MDR TB.
Status update: The information is in the process of collection. Data will be collected next quarter.	

5. Quarterly reporting on key mandatory indicators

Table 5.1 MDR-TB cases detected and initiating second line treatment in country (national data)

Quarter	Number of RR-TB or MDR-TB cases detected (3.1.4)	Number of MDR-TB cases initiating MDR-TB treatment (3.2.4)	Comments:
Total 2011	56	83	
Total 2012	117	110	
Total 2013	131	121	
Total 2014	121	110	
Total 2015	77	74	
Jan-Mar 2016	29	29	
Apr-Jun 2016	29	28	
Jul-Aug 2016			
To date in 2016	58	57	

Table 5.2 Number of pre-/XDR-TB cases started on bedaquiline (BDQ) or delamanid (DLM)(national data)

Quarter	Number of pre-/XDR-TB cases started on BDQ nationwide	Number of pre-/XDR-TB cases started on DLM nationwide	Comments:
Total 2014	NA	NA	
Total 2015	NA	NA	
Jan-Mar 2016	NA	NA	
Apr-Jun 2016	NA	NA	
Jul-Aug 2016			
To date in 2016			

Table 5.3 Number and percent of cases notified by setting (i.e. private sector, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach (CI/ACF/ICF) (3.1.1)

		Reporting period					Comments
		Oct-Dec 2015	Jan-Mar 2016	Apr-Jun 2016	Jul-Sept 2016	Cumulative Year 2	
Overall CTB geographic areas	TB cases (all forms) notified per CTB geographic area *(List each CTB area below - i.e. Province name)*						The report of case notification in OD where word "Full" indicated was report all TB cases that were found in that OD but CTB only reports only childhood TB cases in ODs where word "CHILDHOOD" indicated.
	Battambang (3 ODs) – FULL[1]	496	467	473			
	Kampot (1 OD) - CHILDHOOD[2]	1	3	2			
	Kampong Cham (4 ODs) – 1 FULL and 3 CHILDHOOD	58	70	112			
	Kampong Chhnang (2 ODs) - CHILDHOOD	25	13	Not Available			
	Kampong Speu (2 ODs) – FULL	377	368	588			
	Kampong Thom (1 OD) – CHILDHOOD	4	6	11			
	Prey Veng (5 ODs) – CHILDHOOD	132	129	97			
	Pursat (2 ODs) – FULL	265	233	536			
	Svay Rieng (1 OD) – CHILDHOOD	42	32	96			
	Tbong Khmum (1 OD) – FULL	23	30	50			
	TB cases (all forms) notified for all CTB areas	1,423	1,351	1965			
	All TB cases (all forms) notified nationwide (denominator)	7,986	NA	NA			
	% of national cases notified in CTB geographic areas	18%					
Intervention (setting/population/approach)							
Choose an item.	CTB geographic focus for this intervention: Battambang, Kampot, Kampong Cham, Kampong Chhnang, Kampong Speu, Kampong Thom, Prey Veng, Pursat, Svay Rieng, Tbong Khmum.	See list above	See list above	See list			

[1] "FULL" means that CTB activities include both Community Directly Observed Treatment and Childhood TB
[2] "CHILDHOOD" means CTB's only activity relates to childhood TB

	TB cases (all forms) notified from this intervention	444	412	504 (data in 2 OD is not available).			
	All TB cases notified in this CTB area (denominator)	1,423	1,351	1,965			
	% of cases notified from this intervention	31%	30%	25.6%			
Choose an item.	CTB geographical areas: Five hospitals of Battambang, Moung Russey, Sampove Meas, Kampong Speu and Korng Pisey Intervention: TB screening at outpatient and in-patient departments; referral for diagnosis and treatment.						
	TB cases (all forms) notified from this intervention	238	190	190			
	All TB cases notified in this CTB area (denominator)	1,021	937	1,139			
	% of cases notified from this intervention	23%	20%	17%			

6. Challenge TB-supported international visits (technical and management-related trips)

#	Partner	Name of consultant	Planned quarter				Specific mission objectives	Status (cancelled, pending, completed)	Dates completed	Duration of visit (# of days)	Additional Remarks (Optional)
			Q 1	Q 2	Q 3	Q 4					
1	FHI 360	Camille Saade	x				Reviewed the previous approach, provided recommendations and fine-tuning of the PPM model. The project mainly works with pharmacists and private providers at clinics.	Pending			D'Arcy Richardson will be hired to perform this task. Her mission has been agreed by director of NTP. She will come to the country 2nd week of Aug.
2	FHI 360	TBD					Develop an operation guideline for laboratory microscopy, expert, culture and DST.	Cancelled			
3	FHI 360	Lisa Stevens (replacing Carol Hamilton)				X	1. Support the development of CTB work plan. 2. Provide technical support and review the CTB program implementation.	Pending			It will be replaced by Lisa Stevens. Lisa will come for the support on workplan development.
4	KNCV	Alice Zwerling (replacing Susan van den Hof)		x			Impact evaluation of all case finding and treatment outcomes.	Complete	29 May to 9 June 2016	10 days	Alice Zwerling came to assess the semi ACF in pagoda from 29 May to 9 June 2016. Further details of her trip is written in the key achievement.
5	KNCV	Agnes Gebhard			x		Review the current PMDT approach that CHC implements.	Pending			Dr Agnes Gebhard has taken a new post as country director in Indonesia. This mission trip will be replaced by Mamel Quelapio. The objective of her trip may

											change to the introduction of short term regimen and new drug. Her trip is planned for the first week of Sept.
6	KNCV	Linda Oskam (replacing Kathleen England)	x				Develop Laboratory Guideline on smear microscopy, Xpert, culture and DST.	Pending			Dr. Linda Oskam, an alternative candidate has taken on this task but won't be able to come this quarter due to her busy schedule and will delay until July.
7	WHO	Kerri Viney	x				Development of Operational Research protocol on cluster randomized control trial. Control Arm: Semi Active Case Finding and Contact Investigation versus Intervention Arm: Semi Active Case Finding, Contact Investigation and Active Case Findings.	Complete	31 Jan 2016	10 days	
8	FHI 360	Song Ngak			x		Attend shorter regimens and country director meetings in the Netherland	Complete	24 June 2016	8 days	
9	FHI 360	Eang Chanthol			x		Attend country director meetings in the Netherland	Complete	24 June 2016	5 days	
10	FHI 360	Matsumoto Hiroko			x		Provide Technical Assistance on culture and drug sensitive testing of the drug Resistance Survey	Complete	11 May 2016	10 days	Approved through MOT.
11	FHI 360	Dr Pheng Sok Heng (NTP)				X	Attended the laboratory training for program manager in The Netherlands	Pending			Approved Through MoT as part of capacity building to NTP staff.
12	FHI 360	Khann Sokhan				X	Attend the infection control course in Boston, USA	Pending			Approved through MOT. part of capacity building to CTB staff.

Total number of visits conducted (cumulative for fiscal year)	5
Total number of visits planned in approved work plan	12 (3 trips were added via modification)
Percent of planned international consultant visits conducted	42%

7. Quarterly Indicator Reporting

Sub-objective:	1. Enabling Environment					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
1.1.3. #/% of public sector/parastatal (what is this?) care facilities (Public health facility incl. referral hospital, health center and prisons health post) that report TB cases to the NTP (stratified by type: military, social security, etc.)	RH, HC	annually	404 (RH=5 Prisons=10; HC=389)	377 (RH=8; Prison=10; HC=359) (93%)		Report on an annual basis.

Sub-objective:	2. Comprehensive, high quality diagnostics					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
2.1.2. A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions.		annually	0 (2014)	2		Report on an annual basis.
2.2.1. #/% of laboratories enrolled in EQA for smear microscopy		annually	NA (2014)	18% (40 /215)		Report on an annual basis.
2.2.6. Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System (LQMS).		annually	100% 1/1	100% 1/1		Report on an annual basis.
2.2.7. Number of GLI-approved TB microscopy network standards met		annually	NE	NE		Report on an annual basis.
2.3.1. Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.		annually	15% 1,975/12,747	17% 2,292/13,413		Report on an annual basis.

Sub-objective:	2. Comprehensive, high quality diagnostics					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
2.4.2. #/% of Xpert machines that are functional in country (stratified by Challenge TB, other)	CTB	annually	56% (26/46)	100% (46/46)		Report on an annual basis.

Sub-objective:	3. Patient-centered care and treatment					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach		quarterly	43,738 (2014) (6,529 (2014, 9 ODs, CTB supported sites (Baseline by case finding approach will be set in Y2)	40,300 (2016) (7,200) CTB (~10% increase)	CTB areas: 4,814 Q1=1,423 Q2=1,351 Q3=1,965	Refer to Table 5.3 for more detail.
3.1.4. Number of MDR-TB cases detected		quarterly	121(2013)	145	70 Q1=12 Q2=29 Q3=29	
3.1.8. % of TB cases (all forms) diagnosed among children (0-14)		annually	39% (5,756/15,593; 2014, in 21 ODS)	20% (3,430 /17,152)		Report on an annual basis; refer to Table 5.3 for CTB data.
3.1.10. #/% of prisons conducting regular screening for TB		annually	10 (CTB supported sites)	10 (100%)		Report on an annual basis.
3.1.11. #/% of prisons conducting screening for TB with chest X-ray		annually	10 (CTB supported sites)	10 (100%)		Report on an annual basis.
#/% of new inmates screened		quarterly	320 (100%)	400 (100%)	2,114/2,114 (100%) Q1=964 Q2=526 Q3=624	
#/% of new inmates diagnosed with TB		quarterly	0	0.004% (of new inmates screened)	4 (0.26%) Q1=3 Q2= 1 Q3=0	
3.2.1. Number and percent of TB cases successfully treated (all forms) by setting	CTB	annually	NA (2016)	> 95%		Report on an annual basis.

Sub-objective:	3. Patient-centered care and treatment					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
(i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).				38,290/40,300 (6,840/7,200) CTB		
3.2.4. Number of MDR-TB cases initiating second-line treatment		quarterly	121 (2013)	145	69 Q1=12 Q2=29 Q3=28	
3.2.5. # health facilities w/ PMDT services		quarterly	10	10 (100%)	10	
3.2.6. #/% of presumptive MDR-TB referrals that reach the PMDT site		annually	NA (2016)	95%		Report on an annual basis.
3.2.7. Number and percent of MDR-TB cases successfully treated		annually	79% (87/110; 2012)	> 75%		Report on an annual basis.
3.2.19. Treatment success rate of TB patients diagnosed in prison	CTB (10 prisons)	annually	92% (2013)	> 92%		Report on an annual basis.
3.2.24. % MDR patients who receive social or economic benefits		quarterly	NA (2016)	175	176	

Sub-objective:	4. Targeted screening for active TB					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
4.1.1. #/% of eligible index cases of TB for which contact investigations were undertaken	TB index, MDR TB index	quarterly	NA (will be set in 2016)	TBD	64% (705/1104) Q1=80% (469/588) Q2= (46%) 236/516	The contact investigation was not able to conduct as the identified bacteriologically confirmed cases. Reason was not known so far. CTB team will investigate on this issue.
4.1.2. #/% of children (under the age of five) who are contacts of bacteriologically-confirmed TB cases that are screened for TB		quarterly	NA (will be set in 2016)	TBD	Q1= 421 Q2= 442 Q3=399	

Sub-objective:	5. Infection control					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
5.1.1. Status of TB IC implementation in health facilities	CTB	annually	2	2		Report on an annual basis.
5.1.2. #/% of health facilities implementing TB IC measures with Challenge TB support (stratified by TB and PMDT services)	RH, HC	annually	3.7% 15 /404	4.8% 18 /377		Report on an annual basis.
5.2.3. Number and % of health care workers diagnosed with TB during reporting period	CTB	annually	NA (2014)	6/250 (2.5%)		Report on an annual basis.
5.2.6. #/% of HCW screened for TB	CTB	annually	NA (2014)	250		Report on an annual basis.

Sub-objective:	6. Management of latent TB infection					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
6.1.1. Status of implementing LTBI diagnosis and treatment strategies (0=no policy or practice in place; 1=policies have been developed/updated; 2=LTBI strategies piloted or implemented in limited settings; 3=LTBI strategies implemented nationally		annually	2	3		Report on an annual basis.
6.1.2. % of eligible persons completing LTBI treatment, by key population and adherence strategy	children	Annually	95% (1965/2050) 2013 cohort, March 2015 report	> 95%		Report on an annual basis.
6.1.11. Number of children under the age of 5 years who initiate IPT		quarterly	2,300 NTP report March 2015	2,300	967 Q1= 283 Q2= 335 Q3=386	

Sub-objective:	7. Political commitment and leadership					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
7.1.2. Status of NSP development: 0=The NSP is expired or not being implemented; 1=An updated/new NSP is being drafted; 2=NSP has been developed and costed; 3=NSP has been finalized, endorsed by the government and implemented		annually	3	3		Report on an annual basis.
7.2.3. % of activity budget covered by private sector cost share, by specific activity		annually	NA (2014)	NA		Report on an annual basis.

Sub-objective:	8. Comprehensive partnerships and informed community involvement					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
8.1.3. Status of National Stop TB Partnership		annually	0 (not exist until present)	NA		Report on an annual basis.
8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources		annually	0 (2014)	79% (1.46M/1.85M)		Report on an annual basis.
8.2.1. Global Fund grant rating		annually	A	A2		Report on an annual basis.

Sub-objective:	9. Drug and commodity management systems					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)		annually	0 (2014)	NA		Report on an annual basis.

Sub-objective:	10. Quality data, surveillance and M&E

Performance indicator	Disaggregated by	Frequency of collection	Baseline (timeframe)	End of year target	Results to date	Comments
10.1.4. Status of electronic recording and reporting system		annually	2 (2014)	2		Report on an annual basis.
10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented		annually	No (2014)	TBD		Report on an annual basis.
10.2.3. DR-TB surveillance survey conducted/completed in the last 5 years		annually	No	Yes		Report on an annual basis.
10.2.4. #/% of operations research, evaluation or epidemiological assessment study results disseminated (stratified by level of dissemination: report, presentation, publication)		annually	0 (2014)	2 (100%)		Report on an annual basis.
10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)		annually	NA	11% (16K/146K)		Report on an annual basis.
10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)		annually	NA	NA		Report on an annual basis.

Sub-objective:	11. Human resource development					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
11.1.2. % of planned supervisory visits conducted (stratified by NTP and Challenge TB funded)		quarterly	69% (91/132) (CTB)	322 /322 (100%) (CTB)	261/240 visits (108%) Q1= 86 (80 visits planned) Q2= 86 Q3=89	
11.1.3. # of healthcare workers trained,	CTB	quarterly	NA	3,935	1,194 (F= 342)	

Sub-objective:	11. Human resource development					
Performance indicator	**Disaggregated by**	**Frequency of collection**	**Baseline (timeframe)**	**End of year target**	**Results to date**	**Comments**
by gender and technical area					Q1= 455 (F=182) Q2= 749 (F= 160) Q3=1,005(F=327)	
11.1.5. % of USAID TB funding directed to local partners	CTB	annually	NA (will be collected in 2016)	18% (400K/2.2M)		Report on an annual basis.